

## EPOR Protein, Human, Recombinant (His)

### General Information

Synonyms:	erythropoietin receptor;EPO-R
Protein Construction:	A DNA sequence encoding the extracellular domain (Met 1-Pro 250) of human erythropoietin receptor (NP_000112.1) precursor was fused with a polyhistidine tag at the C-terminus. Predicted N terminal: Ala 25
Species:	Human
Expression Host:	HEK293 Cells
Accession:	P19235-1
Molecular Weight:	26.3 kDa (predicted); 34 kDa (reducing condition, due to glycosylation)

### QC Testing

Biological Activity:	Measured by its ability to inhibit EPO-dependent proliferation of TF-1 human erythroleukemic cells. The ED50 for this effect is typically 15-60 ng/mL in the presence of 0.1 U/mL Recombinant Human EPO.
Purity:	> 98 % as determined by SDS-PAGE
Endotoxin:	< 1.0 EU/μg of the protein as determined by the LAL method.
Formulation:	Lyophilized from a solution filtered through a 0.22 μm filter, containing PBS, 0.05% CHAPS, pH 7.4. Typically, a mixture containing 5% to 8% trehalose, mannitol, and 0.01% Tween 80 is incorporated as a protective agent before lyophilization.

### Preparation and Storage

Reconstitution:	A Certificate of Analysis (CoA) containing reconstitution instructions is included with the products. Please refer to the CoA for detailed information.
Stability & Storage:	It is recommended to store recombinant proteins at -20°C to -80°C for future use. Lyophilized powders can be stably stored for over 12 months, while liquid products can be stored for 6-12 months at -80°C. For reconstituted protein solutions, the solution can be stored at -20°C to -80°C for at least 3 months. Please avoid multiple freeze-thaw cycles and store products in aliquots.
Shipping:	In general, Lyophilized powders are shipping with blue ice.

### Protein Background

Erythropoietin (EPO) is the major glycoprotein hormone regulator of mammalian erythropoiesis, and is produced by kidney and liver in an oxygen-dependent manner. The biological effects of EPO are mediated by the specific erythropoietin receptor (EPOR/EPO Receptor) on bone marrow erythroblasts, which transmits signals important for

both proliferation and differentiation along the erythroid lineage. EPOR protein is a type  $\alpha$ ... single-transmembrane cytokine receptor, and belongs to the homodimerizing subclass which functions as ligand-induced or ligand-stabilized homodimers. EPOR signaling prevents neuronal death and ischemic injury. Recent studies have shown that EPO and EPOR protein may be involved in carcinogenesis, angiogenesis, and invasion.

### Reference

Divoky V, et al. (2002) Mouse surviving solely on human erythropoietin receptor (EpoR): model of human EpoR-linked disease. *Blood* 99(10): 3873-4.

Carruthers SG. (2009) A truncated erythropoietin receptor EPOR-T is associated with hypertension susceptibility. *Clin Pharmacol Ther.* 86(2): 134-6.

Baltaziak M, et al. (2009) Relationships of P53 and Bak with EPO and EPOR in human colorectal cancer. *Anticancer Res.* 29(10):4151-6.

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